



**Montgomery County  
Department of Permitting Services**

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**Structural Design Required Minimum Load Assumptions and Data**

**Structural Design Load Minimum Requirements IBC 2015**

- a- Floor live loads. (Section 1603.1.1)
- b- Any special additional superimposed dead load if applicable.
- c- Roof live loads. (Section 1603.1.2). Minimum roof live load is **30psf. (County amendment)**
- d- Snow Loads: (Section 1603.1.3)
  - Ground snow load ( $P_g$ ) Minimum ground snow load shall be **30 psf (County amendment)**
  - Minimum flat roof snow load ( $P_f$ ), if applicable. If none specified,  $P_f$  will be calculated per ASCE 7/IBC. Calculated as per ASCE 7-10- based on the risk category.
  - Minimum sloped roof snow load ( $P_s$ ), if applicable. If none specified,  $P_s$  will be calculated per ASCE 7/IBC. Calculated as per ASCE 7-10.
  - List all assumed coefficients utilized for the calculation of the flat /slope roof snow load  
Snow exposure factor,  $C_e$ ; Snow importance factor,  $I_s$ ; Thermal factor,  $C_t$ ; Drift surcharge loads(s),  $P_d$ , where the sum of  $P_d$  and  $P_f$  exceeds 20psf.; Width of snow drift(s),  $w$
- e- Wind Loads: (Section 1603.1.4)

Based on the risk category verification by SER Vult and Vnom values required by County are as follows;

Risk Category I: Vult=105 mph; Vnom=82 mph

Risk Category II: Vult=115 mph; Vnom=89 mph

Risk Category III & IV: Vult=120 mph; Vnom=93 mph

Additional to the assumed wind speed following information shall be shown on structural notes;

- Internal pressure coefficient
- Exposure category
- Minimum and maximum design wind pressure for component and cladding.
- Importance factor based on the selected risk category as per **ASCE 7-10, table 1.5-2.**
- For roof types (Monoslope, pitched or troughed) verified information on the notes and provide required wind load reference table for the manufacturer.

- f- Earthquake Design Data: (Section 1603.1.5)

Parameters and coefficients required to be shown on drawings:

- Risk category
- Seismic importance factor ( $I_e$ ).

- Mapped spectral response accelerations  $S_s$  and  $S_1$ . Spectral response accelerations for short period and one second shall be  **$S_s=12.5\%$  and  $S_1=5.5\%$** . (County amendment)
- Site class.
- Design spectral response acceleration parameters,  $S_{ds}$  and  $S_{d1}$ .
- Seismic design category.
- Basic seismic force-resisting system(s).
- Design base shear(s).
- Seismic response coefficient(s),  $C_s$ .
- Response modification factor(s),  $R$ .
- Analysis procedure used.